

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: OTTERNICK POND	Lake Area (ha): 13.76
Town: HUDSON	Maximum depth (m): 3.7
County: Hillsborough	Mean depth (m): 1.9
River Basin: Merrimack	Volume (m ³): 261500
Latitude: 42°46'16" N	Relative depth: 0.9
Longitude: 71°25'25" W	Shore configuration: 1.37
Elevation (ft): 170	Areal water load (m/yr): 38.93
Shore length (m): 1800	Flushing rate (yr ⁻¹): 20.50
Watershed area (ha): 1113.7	P retention coeff.: 0.40
% watershed ponded: 0.4	Lake type: natural w/dam

<u>BIOLOGICAL:</u>		10 February 1999	3 September 1998
DOM. PHYTOPLANKTON (% TOTAL)	#1	NO WINTER PLANKTON	CERATIUM 40%
	#2	ANALYZED	ASTERIONELLA 20%
	#3		OSCILLATORIA 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			6.73
DOM. ZOOPLANKTON (% TOTAL)	#1		NAUPLIUS LARVA 22%
	#2		CLADOCERAN SPP 19%
	#3		VORTICELLA 14%
ROTIFERS/LITER			128
MICROCRUSTACEA/LITER			299
ZOOPLANKTON ABUNDANCE (#/L)			534
VASCULAR PLANT ABUNDANCE			Very abundant
SECCHI DISK TRANSPARENCY (m)			2.6
BOTTOM DISSOLVED OXYGEN (mg/L)		3.2	4.1
BACTERIA (E. coli, #/100 ml)	#1		2
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None
Anoxic volume (m³): None

CHEMICAL:

Lake: OTTERNICK POND

Town: HUDSON

	10 February 1999		3 September 1998		
DEPTH (m)	1.5	3.0	1.0		3.0
pH (units)	6.4	6.5	7.1		7.3
A.N.C. (Alkalinity)	33.1	36.1	34.2		33.4
NITRATE NITROGEN	0.36	0.20	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.50	0.40	0.50		0.60
TOTAL PHOSPHORUS	0.024	0.016	0.028		0.031
CONDUCTIVITY (μ mhos/cm)	285.6	335.0	210.0		212.0
APPARENT COLOR (cpu)	37	37			
MAGNESIUM			1.62		
CALCIUM			14.9		
SODIUM			24.0		
POTASSIUM			2.14		
CHLORIDE	62	82	35		36
SULFATE	12	13	6		6
TN : TP	36	38	18		19
CALCITE SATURATION INDEX			1.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1998

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	6	1	10	Eutro.

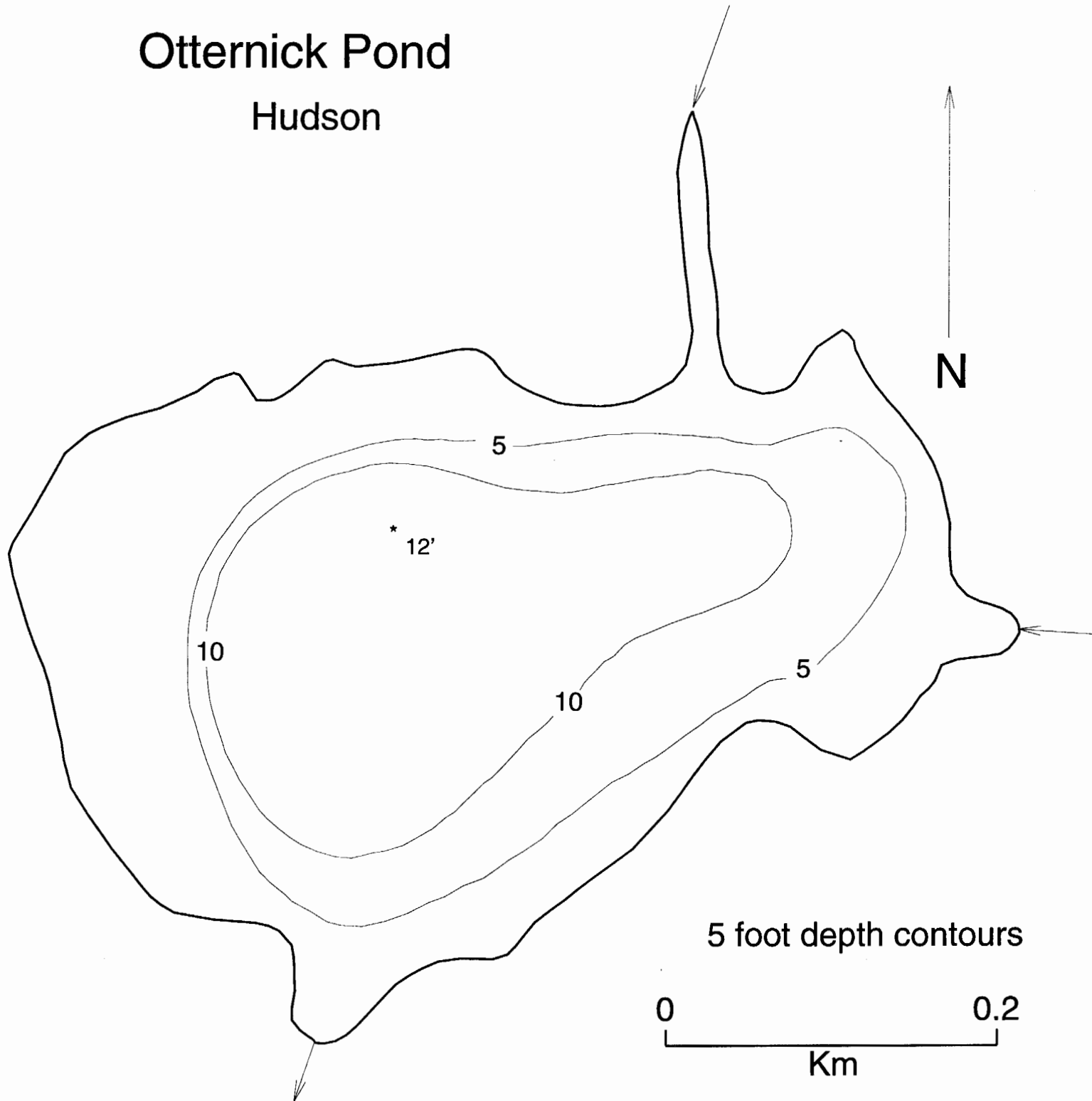
COMMENTS:

1. aka Tarnic Pond; also spelled Otternic and Ottarnic Pond.
2. Otternick Pond was previously surveyed and classified in 1979 and a diagnostic/feasibility study was conducted in 1990-91. The pond has received a eutrophic rating throughout this time period, although the chlorophyll concentration was much less in 1998 than in the previous years.
3. This is a shallow, weedy, tea-colored urban pond that historically received drainage from the now defunct Bensons Wild Animal Farm. All ion levels were high – typical of urban ponds – and sodium and chloride ions suggest road salt runoff.
4. Good boat launch.

Otternick Pond

Hudson

III-118

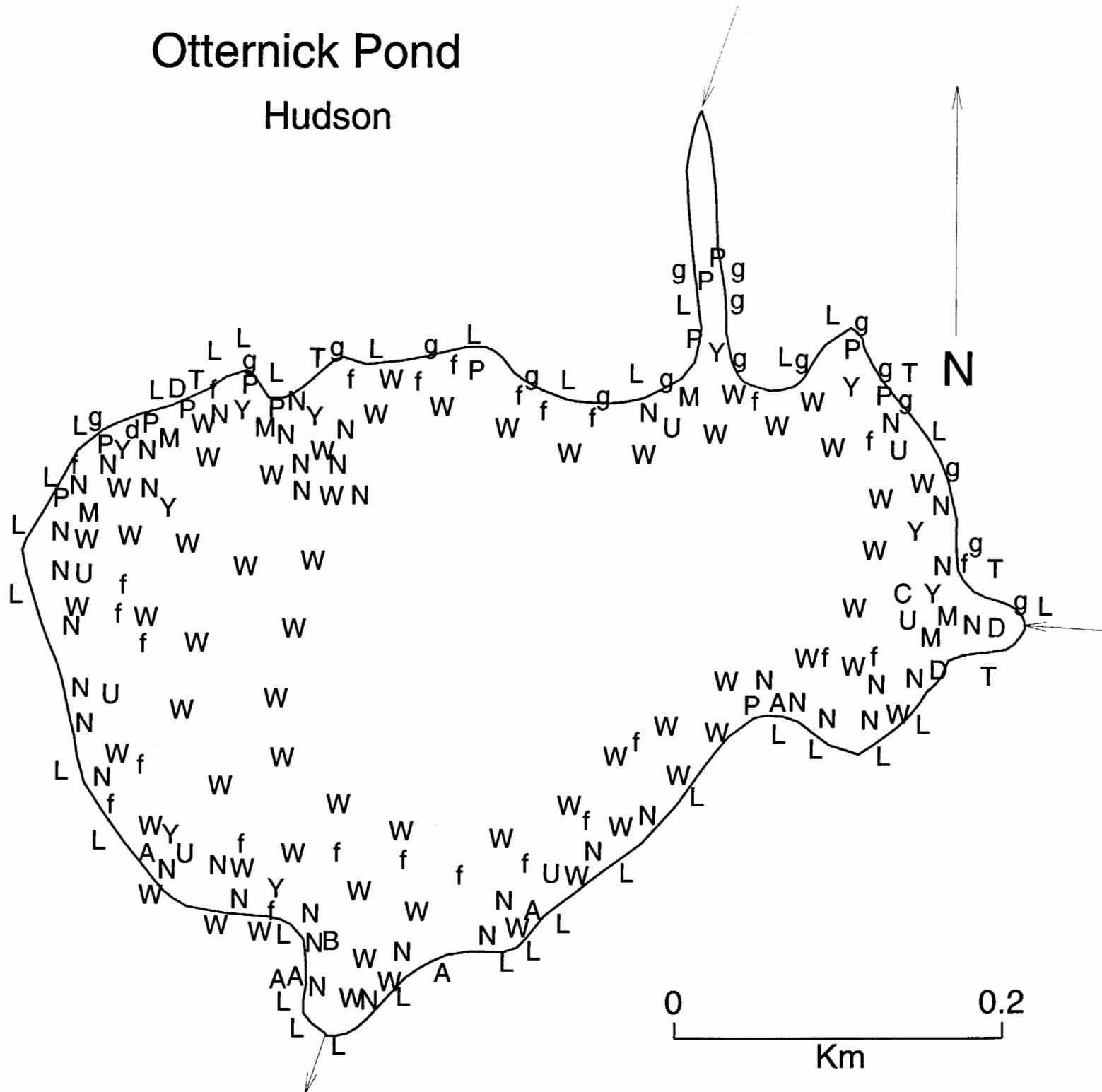


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Otternick Pond

Hudson

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